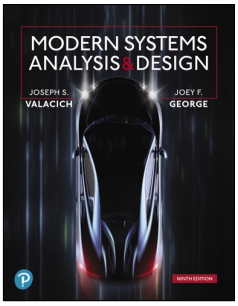
Modern Systems Analysis and Design

Ninth Edition



Appendix 7B

Object-Oriented Analysis and Design: Activity Diagrams

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Learning Objectives

7B.1 Understand how to represent system logic with activity diagrams

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Activity Diagrams (1 of 3)

7B.1 Understand how to represent system logic with activity diagrams

- **Activity diagrams** show the conditional logic for the sequence of system activities needed to accomplish a business function
  - Individual activity may be manual or automated
  - Each activity is

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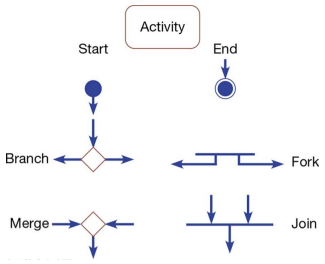
Figure 7-36: Basic Notation for Activity Diagrams



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Activity Diagrams (2 of 3)

7B.1 Understand how to represent system logic with activity diagrams

- Elements of activity diagrams:
  - **Activity**: a rounded triangle representing a behavior carried out while in a particular state
  - **Branch**: a diamond symbol representing a choice that must be made
  - **Merge**: also a diamond symbol representing where two arrows come together but only one leaves
  - **Fork**: a horizontal line representing where two parallel activities begin
  - **Join**: also a horizontal line representing where two activities come together but only one leaves
  - **Swimlane**: columns representing different organizational units of the system

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Figure 7-37: Simple Activity Diagram Showing Conditional Logic

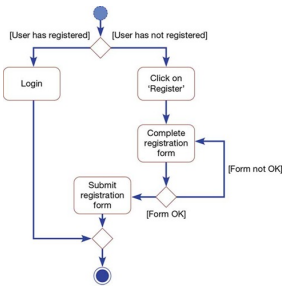

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Figure 7-38: Simple Activity Diagram Showing Conditional Logic

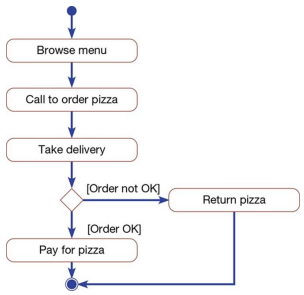

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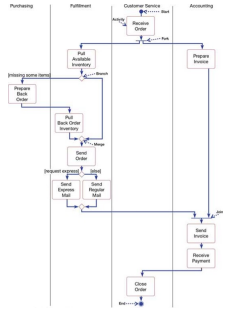
Figure 7-39: Activity Diagram for a Customer Order Process



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Activity Diagrams (3 of 3)

7B.1 Understand how to represent system logic with activity diagrams

- Use activity diagrams to:
  - Depict the flow of control from activity to activity
  - Help in use case analysis to understand what actions are needed to take place
  - Help in identifying extensions in a use case
  - Model work flow and business processes
  - Model the sequential and concurrent steps in a computation process

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Summary

- In this appendix you learned how to:
  - Understand how to represent system logic with activity diagrams

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